



# Addressing Cancer Risk in Virginia's Fire Service

## The Virginia Professional Fire Fighters Call for a Multifaceted Approach to Reduce Occupational Cancer Risk

The men and women protecting Virginia's communities are under attack! They are under attack by a silent enemy...cancer. Every day across Virginia, thousands of fire fighters are exposed to dangerous carcinogens in the workplace. Occupational exposures pose serious health and financial risks to fire fighters and their families. Furthermore, employers face significant accountability and financial risk for permitting exposure to toxic substances.

Occupational cancer risk is perpetuated by fragmented education, engineering controls, and investment in reduction methods. Reducing exposure to cancer-causing agents must become a priority for Virginia's fire service and employers. Risk reduction can only be accomplished through collaboration of all stakeholders. **Prevention outweighs reaction!**

### **Primary actions for reducing occupational exposure to carcinogens**

**Identify and eliminate and/or reduce exposures** – Fire fighters are expected to perform life and property-saving activities in toxic environments. Toxic exposures occur at building, maritime, refuse, transportation, vegetation, and other fire scenes. Also, exposures occur during training and workplace activities. Without identifying toxic exposures, employers are acting in contradiction to recognized hazard communication standards. Employers must implement enforceable risk identification and reduction.

Research has identified presence of various carcinogens at fire scenes. Including, International Agency for Research on Cancer (IARC) Group 1 agents such as: arsenic, asbestos, benzene, and formaldehyde.<sup>1</sup> Carcinogen exposures can result from dermal absorption, inhalation, and ingestion. Exposures occur despite proper use of personal protective equipment (PPE).

Post-fire and workplace practices can prolong exposures. Contaminated equipment/PPE should be handled and transported with regard for preventing additional exposure(s). Also, scrutiny should be applied to the transport of PPE via personal vehicles. The transfer of contaminants is highly probable and risk is not clearly communicated to employees.

Occupational exposure to diesel exhaust occurs on a daily basis. The IARC has classified diesel engine exhaust as a known human carcinogen.<sup>2</sup> Exposure can be derived from actively circulating or latent diesel exhaust products. Facilities/vehicles without exhaust control equipment pose an unnecessary and unacceptable risk to employees.

**Investment in health assessments and monitoring** – Employers should invest in efforts to promote health and wellness. Annual medical exams and monitoring can identify ailment/illness during early stages. Early-stage detection can promote cure/remedy and reduced treatment costs. Comprehensive health and wellness program information can be found in the [Wellness Fitness Initiative Resource](#).<sup>3</sup>

**Access to clean Personal Protective Equipment (PPE) and cleaning methods** – When exposed to the productions of combustion, PPE can become impregnated with carcinogens. Wearing contaminated PPE poses a significant risk for repeated carcinogen exposure. In numerous departments across the state, fire fighters must wear contaminated gear until the end of a designated shift. Expectations for prolonged wear of contaminated gear are unacceptable.

PPE cleaning can take several hours or days to accomplish. While cleaning is accomplished, fire fighters should have access to a clean PPE ensemble. Spare PPE must be available to meet the needs of continued emergency response requirements. Support for PPE purchase is available via FEMA grant and Virginia Department of Fire Programs (DFP) Aid to Localities funding.

Contaminated PPE must receive prompt and appropriate cleaning. PPE cleaning requires specialized laundry machines (fire department-based) and/or vendor services. If fire department-based cleaning is utilized, an adequate number of machines should be available to meet practical cleaning needs. Access to these services is paramount for conforming to current PPE cleaning best practices. Cleaning equipment can also be acquired via FEMA and DFP funding assistance.

**Provide uniform exposure awareness and avoidance training (statewide)** – A 2014 JLARC Line of Duty Act study identified health and wellness initiatives as methods to prevent line of duty death and disability.<sup>4</sup> However, an authorized platform for cancer risk reduction does not exist. Because access to resources varies across jurisdictions, a statewide curriculum should be developed for use by all fire departments. Curriculum development should receive collaboration from fire service, academic, and regulatory entities. At a minimum, content should include clear explanation of the following:

- Health risks of occupational exposure to carcinogens
- Best practices for reducing risk (individual and organizational)
- Associated workers' compensation law
- Policy and regulatory implications of occupational exposures

Virginia's fire service community must be made aware of the risks of engaging in fire protection activities.

## **Going Forward**

Fire service cancer research is evolving and will assuredly result in greater ability to understand and react to risk(s). These recommended actions are a primary step toward addressing a complex problem threatening Virginia’s fire service. Furthermore, exposure reduction practices should begin immediately. Until uniform risk reduction practices are developed, all Virginia fire departments should immediately implement the protective actions identified in [\*Taking Action against Cancer in the Fire Service\*](#).<sup>5</sup>

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<sup>1</sup>International Agency For Research On Cancer “IARC Monographs on the Evaluation of Carcinogenic Risks to Humans.” Volume 98 2010 Lyon, France p. 104.

<sup>2</sup>International Agency For Research On Cancer “IARC: Diesel Engine Exhaust Carcinogenic.” [https://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213\\_E.pdf](https://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf) 12 June 2012. Accessed 29 July 2017.

<sup>3</sup>International Association of Fire Fighters. *Wellness Fitness Initiative Resource*. [www.iaff.org/hs/wfiresource/default.html](http://www.iaff.org/hs/wfiresource/default.html). Accessed 1 Aug. 2017.

<sup>4</sup>Virginia Joint Legislative Audit and Review Commission “Virginia’s Line of Duty Act.” [jlarc.virginia.gov/pdfs/reports/Rpt464.pdf](http://jlarc.virginia.gov/pdfs/reports/Rpt464.pdf) Dec. 2014 pp. 71-72.

<sup>5</sup>Firefighter Cancer Support Network “Taking Action against Cancer in Fire Service.” [firefightercancersupport.org/wp-content/uploads/2013/08/Taking-Action-against-Cancer-in-the-Fire-Service.pdf](http://firefightercancersupport.org/wp-content/uploads/2013/08/Taking-Action-against-Cancer-in-the-Fire-Service.pdf) p. 15 Accessed 29 July 2017.